SEQUENCE LISTING

<110> Xu, Hong-Ji
       Hu, Shi-Xue
       Mills, Gordon B.

<120> ENDOGENOUS GRANZYME B IN NON-IMMUNE CELLS

<130> AND541/4-007US/58011

<140> Unknown
<141> 2003-09-24

<150> 60/413,591
<151> 2002-09-25

<160> 6

<170> PatentIn version 3.1

<210> 1
<211> 1977
<212> DNA
<213> Homo sapiens

<400> 1

```
tcacaagaat cgaaccatgt agagagactt agttgtcttt taacagaatt gggcacgggc      60

tgttcagaaa caacaatctt tcacatccat tataatgata gcattagtgt agtttgttta     120

gcaaatgttt actgtgagcc tgttatgtgc tgagcctgct atgtaagaag tgtggctctc     180

tggacaggag acagaatact aaacaacaca actactgatc tttggctgcc tggcatgctt     240

cctcacttca tatggtatca gcaatttagc accacaaacg tcctttagag aaccagccct     300

ttctcattct tggttctagt ggcttgagta gactgacccc agcctaccca aagtggattt     360

gactcctagc aattcattaa tctagcccaa tccaataaaa tgtcaagtac aggactttta     420

ttgaaagcat tcagaaaaga ggtggactct cacactaaac atttgtaact aaataaggga     480

tgttagaaat tctctagaaa ggaagctatg ataataaatg ggttgctaga tgggtctagt     540

agatggtggc cgtgctttgt tactgccttg tgtattgtgc taccatagcc ctccccaaac     600

tgtactctgg ctcctggcat ttccgtctct tcaaccagat ggtcagctct ctaagtgaag     660

gagacacatc tccaacatgc ttggttctag cacaacagaa gggctcaaac acatacctgc     720

taaagaaact atcctgatgg atttagcagc atggccatga ggcattggcg gttctatcac     780

tgggaactca ggtttctggt gctccagtac ctctactggc tgataccaca tcctacaatt     840

cacttcatag gcttgggttc ctgctctggg ctgaataggt ggtccactct gagtcatcag     900

ctgtgggtga tgatgtggtc actgcatgat tctcacacaa gcacccagag gacgtcatca     960

ggcagaggca gtgggggtgg gcagcattta cagaaaatct gtgatgagac accacaaaac    1020

cagaggggaa catgaagtca ctgagcctgc tccacctctt tcctctccca agagctaaaa    1080

gagagcaagg aggaaacaac agcagctcca accagggcag ccttcctgag aagatgcaac    1140
```

caatcctgct tctgctggcc ttcctcctgc tgcccagggc agatgcaggg gagatcatcg 1200

ggggacatga ggccaagccc cactcccgcc cctacatggc ttatcttatg atctgggatc 1260

agaagtctct gaagaggtgc ggtggcttcc tgatacaaga cgacttcgtg ctgacagctg 1320

ctcactgttg gggaagctcc ataaatgtca ccttgggggc ccacaatatc aaagaacagg 1380

agccgaccca gcagtttatc cctgtgaaaa gacccatccc ccatccagcc tataatccta 1440

agaacttctc caacgacatc atgctactgc agctggagag aaaggccaag cggaccagag 1500

ctgtgcagcc cctcaggcta cctagcaaca aggcccaggt gaagccaggg cagacatgca 1560

gtgtggccgg ctgggggcag acggcccccc tgggaaaaca ctcacacaca ctacaagagg 1620

tgaagatgac agtgcaggaa gatcgaaagt gcgaatctga cttacgccat tattacgaca 1680

gtaccattga gttgtgcgtg ggggacccag agattaaaaa gacttccttt aaggggggact 1740

ctggaggccc tcttgtgtgt aacaaggtgg cccagggcat tgtctcctat ggacgaaaca 1800

atggcatgcc tccacgagcc tgcaccaaag tctcaagctt tgtacactgg ataaagaaaa 1860

ccatgaaacg ctactaacta caggaagcaa actaagcccc cgctgtaatg aaacaccttc 1920

tctggagcca agtccagatt tacactggga gaggtgccag caactgaata aatacct 1977

<210> 2
<211> 946
<212> DNA
<213> Homo sapiens

<220>
<221> CDS
<222> (1)..(843)
<223>

<400> 2

```
atg aag tca ctg agc ctg ctc cac ctc ttt cct ctc cca aga gct aaa     48
Met Lys Ser Leu Ser Leu Leu His Leu Phe Pro Leu Pro Arg Ala Lys
1               5                   10                  15

aga gag caa gga gga aac aac agc agc tcc aac cag ggc agc ctt cct     96
Arg Glu Gln Gly Gly Asn Asn Ser Ser Ser Asn Gln Gly Ser Leu Pro
                20                  25                  30

gag aag atg caa cca atc ctg ctt ctg ctg gcc ttc ctc ctg ctg ccc    144
Glu Lys Met Gln Pro Ile Leu Leu Leu Leu Ala Phe Leu Leu Leu Pro
            35                  40                  45

agg gca gat gca ggg gag atc atc ggg gga cat gag gcc aag ccc cac    192
Arg Ala Asp Ala Gly Glu Ile Ile Gly Gly His Glu Ala Lys Pro His
        50                  55                  60

tcc cgc ccc tac atg gct tat ctt atg atc tgg gat cag aag tct ctg    240
Ser Arg Pro Tyr Met Ala Tyr Leu Met Ile Trp Asp Gln Lys Ser Leu
65                  70                  75                  80

aag agg tgc ggt ggc ttc ctg ata caa gac gac ttc gtg ctg aca gct    288
Lys Arg Cys Gly Gly Phe Leu Ile Gln Asp Asp Phe Val Leu Thr Ala
```

```
                   85                    90                         95

gct cac tgt tgg gga agc tcc ata aat gtc acc ttg ggg gcc cac aat        336
Ala His Cys Trp Gly Ser Ser Ile Asn Val Thr Leu Gly Ala His Asn
            100                 105                 110

atc aaa gaa cag gag ccg acc cag cag ttt atc cct gtg aaa aga ccc        384
Ile Lys Glu Gln Glu Pro Thr Gln Gln Phe Ile Pro Val Lys Arg Pro
        115                 120                 125

atc ccc cat cca gcc tat aat cct aag aac ttc tcc aac gac atc atg        432
Ile Pro His Pro Ala Tyr Asn Pro Lys Asn Phe Ser Asn Asp Ile Met
        130                 135                 140

cta ctg cag ctg gag aga aag gcc aag cgg acc aga gct gtg cag ccc        480
Leu Leu Gln Leu Glu Arg Lys Ala Lys Arg Thr Arg Ala Val Gln Pro
145                 150                 155                 160

ctc agg cta cct agc aac aag gcc cag gtg aag cca ggg cag aca tgc        528
Leu Arg Leu Pro Ser Asn Lys Ala Gln Val Lys Pro Gly Gln Thr Cys
                165                 170                 175

agt gtg gcc ggc tgg ggg cag acg gcc ccc ctg gga aaa cac tca cac        576
Ser Val Ala Gly Trp Gly Gln Thr Ala Pro Leu Gly Lys His Ser His
            180                 185                 190

aca cta caa gag gtg aag atg aca gtg cag gaa gat cga aag tgc gaa        624
Thr Leu Gln Glu Val Lys Met Thr Val Gln Glu Asp Arg Lys Cys Glu
            195                 200                 205

tct gac tta cgc cat tat tac gac agt acc att gag ttg tgc gtg ggg        672
Ser Asp Leu Arg His Tyr Tyr Asp Ser Thr Ile Glu Leu Cys Val Gly
        210                 215                 220

gac cca gag att aaa aag act tcc ttt aag ggg gac tct gga ggc cct        720
Asp Pro Glu Ile Lys Lys Thr Ser Phe Lys Gly Asp Ser Gly Gly Pro
225                 230                 235                 240

ctt gtg tgt aac aag gtg gcc cag ggc att gtc tcc tat gga cga aac        768
Leu Val Cys Asn Lys Val Ala Gln Gly Ile Val Ser Tyr Gly Arg Asn
                245                 250                 255

aat ggc atg cct cca cga gcc tgc acc aaa gtc tca agc ttt gta cac        816
Asn Gly Met Pro Pro Arg Ala Cys Thr Lys Val Ser Ser Phe Val His
            260                 265                 270

tgg ata aag aaa acc atg aaa cgc tac taactacagg aagcaaacta            863
Trp Ile Lys Lys Thr Met Lys Arg Tyr
            275                 280

agcccccgct gtaatgaaac accttctctg gagccaagtc cagatttaca ctgggagagg    923

tgccagcaac tgaataaata cct                                              946


<210>   3
<211>   281
<212>   PRT
<213>   Homo sapiens

<400>   3

Met Lys Ser Leu Ser Leu Leu His Leu Phe Pro Leu Pro Arg Ala Lys
```

```
1                5                         10                      15


Arg Glu Gln Gly Gly Asn Asn Ser Ser Ser Asn Gln Gly Ser Leu Pro
            20                  25                  30


Glu Lys Met Gln Pro Ile Leu Leu Leu Leu Ala Phe Leu Leu Leu Pro
            35                  40                  45


Arg Ala Asp Ala Gly Glu Ile Ile Gly Gly His Glu Ala Lys Pro His
        50                  55                  60


Ser Arg Pro Tyr Met Ala Tyr Leu Met Ile Trp Asp Gln Lys Ser Leu
65                  70                  75                  80


Lys Arg Cys Gly Gly Phe Leu Ile Gln Asp Asp Phe Val Leu Thr Ala
                85                  90                  95


Ala His Cys Trp Gly Ser Ser Ile Asn Val Thr Leu Gly Ala His Asn
                100                 105                 110


Ile Lys Glu Gln Glu Pro Thr Gln Gln Phe Ile Pro Val Lys Arg Pro
            115                 120                 125


Ile Pro His Pro Ala Tyr Asn Pro Lys Asn Phe Ser Asn Asp Ile Met
    130                 135                 140


Leu Leu Gln Leu Glu Arg Lys Ala Lys Arg Thr Arg Ala Val Gln Pro
145                 150                 155                 160


Leu Arg Leu Pro Ser Asn Lys Ala Gln Val Lys Pro Gly Gln Thr Cys
                165                 170                 175


Ser Val Ala Gly Trp Gly Gln Thr Ala Pro Leu Gly Lys His Ser His
                180                 185                 190


Thr Leu Gln Glu Val Lys Met Thr Val Gln Glu Asp Arg Lys Cys Glu
            195                 200                 205


Ser Asp Leu Arg His Tyr Tyr Asp Ser Thr Ile Glu Leu Cys Val Gly
    210                 215                 220


Asp Pro Glu Ile Lys Lys Thr Ser Phe Lys Gly Asp Ser Gly Gly Pro
225                 230                 235                 240


Leu Val Cys Asn Lys Val Ala Gln Gly Ile Val Ser Tyr Gly Arg Asn
                245                 250                 255
```

Page 4

```
Asn Gly Met Pro Pro Arg Ala Cys Thr Lys Val Ser Ser Phe Val His
            260                 265                 270

Trp Ile Lys Lys Thr Met Lys Arg Tyr
        275             280
```

```
<210>   4
<211>   846
<212>   DNA
<213>   Homo sapiens

<400>   4
atgaagtcac tgagcctgct ccacctcttt cctctcccaa gagctaaaag agagcaagga      60

ggaaacaaca gcagctccaa ccagggcagc cttcctgaga agatgcaacc aatcctgctt     120

ctgctggcct tcctcctgct gcccagggca gatgcagggg agatcatcgg gggacatgag     180

gccaagcccc actcccgccc ctacatggct tatcttatga tctgggatca gaagtctctg     240

aagaggtgcg gtggcttcct gatacaagac gacttcgtgc tgacagctgc tcactgttgg     300

ggaagctcca taaatgtcac cttggggggcc cacaatatca agaacagga gccgacccag     360

cagtttatcc ctgtgaaaag acccatcccc catccagcct ataatcctaa gaacttctcc     420

aacgacatca tgctactgca gctggagaga aaggccaagc ggaccagagc tgtgcagccc     480

ctcaggctac ctagcaacaa ggcccaggtg aagccagggc agacatgcag tgtggccggc     540

tgggggcaga cggcccccct gggaaaacac tcacacacac tacaagaggt gaagatgaca     600

gtgcaggaag atcgaaagtg cgaatctgac ttacgccatt attacgacag taccattgag     660

ttgtgcgtgg gggacccaga gattaaaaag acttccttta aggggactc tggaggccct     720

cttgtgtgta caaggtggc ccagggcatt gtctcctatg gacgaaacaa tggcatgcct     780

ccacgagcct gcaccaaagt ctcaagcttt gtacactgga taaagaaaac catgaaacgc     840

tactaa                                                              846
```

```
<210>   5
<211>   952
<212>   DNA
<213>   Homo sapiens

<400>   5
gggaacatga agtcactgag cctgctccac ctctttcctc tcccaagagc taaaagagag      60

caaggaggaa acaacagcag ctccaaccag ggcagccttc ctgagaagat gcaaccaatc     120

ctgcttctgc tggccttcct cctgctgccc agggcagatg caggggagat catcggggga     180

catgaggcca agccccactc ccgcccctac atggcttatc ttatgatctg ggatcagaag     240

tctctgaaga ggtgcggtgg cttcctgata caagacgact tcgtgctgac agctgctcac     300

tgttggggaa gctccataaa tgtcaccttg ggggcccaca atatcaaaga acaggagccg     360
```

```
acccagcagt ttatccctgt gaaaagaccc atcccccatc cagcctataa tcctaagaac    420

ttctccaacg acatcatgct actgcagctg gagagaaagg ccaagcggac cagagctgtg    480

cagcccctca ggctacctag caacaaggcc caggtgaagc cagggcagac atgcagtgtg    540

gccggctggg ggcagacggc ccccctggga aaacactcac acacactaca agaggtgaag    600

atgacagtgc aggaagatcg aaagtgcgaa tctgacttac gccattatta cgacagtacc    660

attgagttgt gcgtggggga cccagagatt aaaaagactt cctttaaggg ggactctgga    720

ggccctcttg tgtgtaacaa ggtggcccag ggcattgtct cctatggacg aaacaatggc    780

atgcctccac gagcctgcac caaagtctca agctttgtac actggataaa gaaaaccatg    840

aaacgctact aactacagga agcaaactaa gcccccgctg taatgaaaca ccttctctgg·    900

agccaagtcc agatttacac tgggagaggt gccagcaact gaataaatac ct            952
```

```
<210>   6
<211>   1091
<212>   DNA
<213>   Homo sapiens

<400>   6
actctgagtc atcagctgtg ggtgatgatg tggtcactgc atgattctca cacaagcacc     60

cagaggacgt catcaggcag aggcagtggg ggtgggcagc atttacagaa aatctgtgat    120

gagacaccac aaaaccagag gggaacatga agtcactgag cctgctccac ctctttcctc    180

tcccaagagc taaaagagag caaggaggaa acaacagcag ctccaaccag ggcagccttc    240

ctgagaagat gcaaccaatc ctgcttctgc tggccttcct cctgctgccc agggcagatg    300

caggggagat catcggggga catgaggcca agccccactc ccgcccctac atggcttatc    360

ttatgatctg ggatcagaag tctctgaaga ggtgcggtgg cttcctgata caagacgact    420

tcgtgctgac agctgctcac tgttgggggaa gctccataaa tgtcaccttg ggggcccaca    480

atatcaaaga acaggagccg acccagcagt ttatccctgt gaaaaaccca tcccccatcc    540

agcctataat cctaagaact tctccaacga catcatgcta ctgcagctgg agagaaaggc    600

caagcggacc agagctgtgc agcccctcag gctacctagc aacaaggccc aggtgaagcc    660

agggcagaca tgcagtgtgg ccggctgggg gcagacggcc cccctgggaa aacactcaca    720

cacactacaa gaggtgaaga tgacagtgca ggaagatcga aagtgcgaat ctgacttacg    780

ccattattac gacagtacca ttgagttgtg cgtgggggac ccagagatta aaaagacttc    840

ctttaagggg gactctggag ccctcttgt gtgtaacaag gtggcccagg gcattgtctc    900

ctatggacga aacaatggca tgcctccacg agcctgcacc aaagtctcaa gctttgtaca    960

ctggataaag aaaaccatga aacgctacta actacaggaa gcaaactaag cccccgctgt   1020

aatgaaacac cttctctgga gccaagtcca gatttacact gggagaggtg ccagcaactg   1080
```

aataaatacc t

1091